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TO: Each Supervisor

FROM: Thomas L. Garthwaite, M.D.
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SUBJECT: **FUTURE OF KING/DREW MEDICAL CENTER (KDMC)**

In preparation for your discussion and action on August 16, 2005 regarding the future of KDMC, the Department of Health Services (DHS) has been collecting and reviewing data regarding progress in improving and assuring the quality of patient care at KDMC. The attached data and information complements and expands the data contained in the reports provided by Navigant, Inc. The data also provides a better means of assessing the progress of the overall turnaround than is provided by single case reports of medical error.

There is progress and, of course, additional work to do. Laura Sarff, Bruce Chernof and I are available to answer questions.

TLG:tlg

Attachment

c: Chief Administrative Officer
County Counsel
Executive Officer, Board of Supervisors
Hospital Advisory Board (HAB)
Health Leadership Board (HLB)

Quality of Care and Patient Safety at KDMC

Overview

KDMC has had a long history of clinical and administrative challenges. In the last year, the Department has undertaken a series of initiatives in an effort to fundamentally change the course of the facility. These initiatives include:

- A nursing review by the Camden Group resulting in the removal of the majority of the senior nursing management team (December 2003 to November 2004).
- Reassignment of senior managers from within DHS to take over operations of the hospital and medical directors' office (October 2003 to November 2004).
- The closure of the Trauma Program to decompress the emergency room and to reduce the severity of illness burden in the facility (March 1, 2005).
- The introduction of the Navigant Group to fill all key executive and senior management positions on an interim basis, to assess and improve all facets of the clinical program as well as redevelop management processes (November 2004 to present).

Is the Hospital Safe?

All hospitals are risky environments. National efforts to address risk and improve outcomes have been well documented by a variety of organizations such as the Institute of Medicine's Crossing the Quality Chasm and To Err is Human reports. While individual cases have raised concerns and highlighted specific areas that need improvement, data sets that compare KDMC to other hospitals demonstrate mortality rates that are comparable to similar types of hospitals. The Department participates in a national hospital data benchmarking program for quality improvement purposes. When compared with other academic and public medical centers based on the data submitted by these organizations:

- The overall risk-adjusted mortality rate is not significantly different at KDMC than the national average.
- The overall risk adjusted mortality rate is not significantly different between DHS facilities.
- Post-procedure mortality rates for the first quarter of 2005 and running year (April 2004 to March 2005) met national performance targets.
- In-hospital mortality for specific common medical conditions (e.g., pneumonia, strokes, heart attacks, heart failure, gastrointestinal bleeding, hip fractures):
    - Met national performance targets for five of six common medical conditions in the first quarter of 2005
    - Met national performance targets in six of six common medical conditions and exceeded national performance on one of these six conditions for running year April 2004 to March 2005.

The closure of the Trauma Service was a specific attempt to decrease the acuity of patients in the facility and to decompress the emergency room in an effort to improve the

safety margin of the facility. The expected outcome was a decrease in the overall mortality rate of the facility as the acuity decreased. This is exactly what has occurred.

- The monthly number of inpatient deaths (unadjusted for acuity) has decreased from 26 in January 2005 to 15 in June 2005.
- The total monthly unadjusted number of deaths (including patients arriving at the hospital already dead and those dying in the emergency room) has decreased from 60 in January 2005 to 36 in June 2005.
- If we compare the number of deaths to the number of admissions, the unadjusted mortality rate goes from 3.2% in January to 1.6% in June.
- All these rates reflect dramatic reductions after March 2005 when Trauma was closed.

Have There Been Measurable Improvements Over The Past Year?

Organizational improvement is measured across two domains – process and outcomes. When working through system change process improvements generally are the leading indicators of improvement while outcomes tend to be lagging indicators. It is critical to note that when Navigant arrived data collection was extremely uneven and use of data to manage functions was also extremely poor. As Navigant implemented appropriate data collection and management activities, some metrics appeared to get worse initially. This is a direct result of prior incomplete data collection and under-reporting and not necessarily a reflection of a change in clinical care. A wide variety of measures are tracked on a daily, weekly and monthly basis. Most of this data is formative as opposed to definitive. Data samples may be small in a given a week so what is important are the trends within the data as opposed to the absolute result.

Monthly trend improvements include:

- A significant decrease in emergency room triage time from 75 minutes in January 2005 to 35 minutes in May 2005.
- A significant and continuous decrease in the number of falls in hospitalized patients from 10 in January 2005 to 2 in May 2005. Fall rate is a proxy measure for the effectiveness of physician and nursing care planning and the attentiveness of bedside nursing care.
- Hospital length of stay has improved from 5.5 days in January 2005 to 4.4 in May 2005. The length of stay is also a proxy measure for organizational effectiveness.
- Ventilator associated infections in ICU A have decreased from 9.5% per 1,000 ventilator days in January 2005 to 4.2% in May 2005 and from 18% in January 2005 to 12.6% in June 2005 in the CCU. This is a national indicator, related to the effectiveness of clinical management for these high-risk patients.
- The length of stay in the emergency room for patients who are admitted has decreased from 17 hours in January 2005 to 9.8 hours in June 2005, and the length of stay for patients who are treated and released decreased from 15 hours in January 2005 to 8.0 hours June 2005. This is also a measure of improvements in organizational efficiency.

- The total triage time in the emergency room has decreased from 189 minutes in January 2005 to 95 minutes in June 2005.
- Compliance with ACLS protocol response was 100% in May and June 2005.
- Average number of patients discharged by noon went from 3% to 8%.

Weekly trend improvements include:

- Implementation of a Code 9 policy (management of assaultive behavior) with monthly tracking demonstrating 100% compliance.
- Comprehensive restructuring of the physician on-call scheduling process with continuous improvement of both system and individual issues.
- Implementation of an ER Diversion policy that appropriately moves to the ER to diversion status when the emergency exceeds defined census targets.

DHS Performance Indicators

DHS has been collecting performance indicators across the department for several years. A subset of this data is presented here.

- Availability of electronic discharge summaries within 30 days has improved from 0% in 2003 to approximately 50% by the end of 2004.
- Measures related to management of heart attacks have remained stable using a 12-month running average from October 2003 to December 2004; however, KDMC's performance relative to other DHS facilities is lower. For instance, compliance with administration of specific medications within 24 hours is 71% while other DHS facilities range from 91% to 98%; and compliance with administration of aspirin on arrival is 88% at KDMC while other DHS facilities compliance is 95% to 99%.
- Measures related to management of pneumonia have remained stable over a 12-month running average from October 2003 to December 2004; however, KDMC's performance relative to some other DHS facilities is lower. For example in measures related to providing advice for smoking cessation, KDMC's compliance is 11% while other DHS facilities range from 8% to 63%. However, the more clinically pertinent indicator of oxygenation assessment shows KDMC's compliance at 94%, while other DHS facilities range from 79% to 100%.
- Measures related to the management of congestive heart failure have decreased slightly over a 12-month running average from October 2003 to December 2004. As an example, compliance with complete discharge instructions is 16% (down from 19%), while other DHS facilities range from 28% to 56%. In another example, the measure that addresses administration of specific medications at discharge has shown a slight downward trend over the last 2 years; however, the measure's compliance is high at 90%, with other DHS facilities ranging from 73% to 92%.

Evidence of Improved Residency Supervision:

The DHS Quality Improvement Program (DHSQIP) conducts periodic audits of Resident Supervision. In 2003 DHSQIP conducted an audit of over 200 medical records looking for documentation that an attending physician was overseeing the care. Data on three of the high volume indicators reveal improvements in resident supervision.

- In 2003 documentation of supervision for patient admissions to a general nursing ward was 74% in a sample size of 290 records. In 2004, a larger sample of 340 records showed compliance at 85%. A repeat spot audit in 2005 with a smaller sample of 20 open records (10% of inpatient records) demonstrated 100% compliance.
- In 2003 documentation of daily oversight for general ward inpatients demonstrated 51% compliance in a sample size of 258 records. In 2004, with a sample size of 290 records, compliance improved to 64%. In the recent spot audit of 2005 with a sample of 18 open records, compliance was 94.5%.
- In 2003 documentation of attending supervision in the Emergency Department reflected a compliance rate of 80% with a sample size of 220. In 2004, the compliance was 97% with a sample size of 609. In the recent spot audit of 2005, the compliance was 86.5% with a sample size of 89 records.

These leading indicators suggest that critical management, direct patient care and cultural changes are beginning to take hold. There are still many areas where improvements have yet to fully take hold. These are areas that are currently under extraordinary focus by Navigant. Many of the open issues involve interdisciplinary care delivery such as the operating room and medication management. Oversight of line nursing functions also remains important issues, but the Department and Navigant have made headway in hiring clinical nursing directors to help address this issue over the longer term.

Metrics where significant improvements have not been documented include:

- OR suite utilization has remained relatively stable at 26% in January 2005 and 25%in May 2005.
- Nursing assessment documentation completed within 24 hours has gone from 95% in January 2005 to 86% in May 2005. A similar measure in the ED ranges from 90% to 54% during the 5-month period of January 2005 to May 2005.
- Completion of vital signs was cited by various regulatory agencies. In the ED the percentage of completing vital signs every two hours ranges from 76% to 96% over the 5-month period of January 2005 to May 2005. Similarly, on the nursing units the compliance ranges from 85% to 93% between January 2005 and June 2005.
- Documentation of physician notification of abnormal vital signs has decreased from 75% in January 2005 to 58% in May 2005.

During this period of time (January 2005 to June 2005) the nursing turnover rate has fluctuated between 20% and 21.9%, with June 2005 data reflecting a net loss of seven registered nurses. The percent of traveler nursing staff to total productive nursing hours

is between 53% and 62% depending on the nursing unit. This lack of continuity in the nursing workforce will slow progress along these indicators.

Overall, the data suggests that improvements have been made in some areas of operational efficiency and clinical competence and resident supervision. However, there is still a need to generalize and institutionalize these improvements across the organization. Further, these data represent only a short period of time and as processes improve, it will be important to move toward gathering more outcome data.